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RISK-MANAGEMENT
INFORMATION

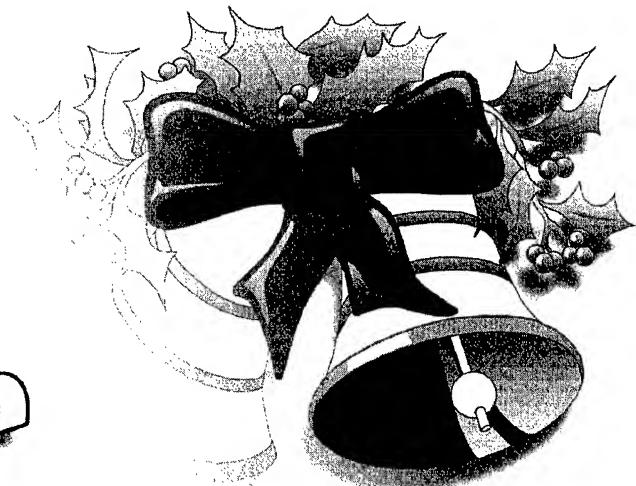
December 2000 ♦ VOL 28 ♦ NO 12

<http://safety.army.mil>

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Good Tidings...



Banner Year in Army Safety

UNITED STATES ARMY HAS BANNER YEAR IN SAFETY

The U. S. Army just completed one of its safest years in history. Army aviation accidents and fatalities are at an unprecedented low, and ground and vehicle accidents and fatalities have also been reduced from previous years. The largest reductions were in Army aviation. Aviation flight fatalities have dropped from 22 in Fiscal Year 1999 to four in FY 2000, an 82-percent reduction. Class A and B flight accident rates for FY00 show a 70-percent reduction from FY99.

Not only did fatality rates decline in the aviation community, but the Army also closed out FY00 with its second-lowest year ever of ground and privately owned vehicle (POV) fatalities. POV accidents, notoriously the number-one killer of soldiers, claimed the lives of 114 soldiers in FY00, compared to 124 in FY99. On-duty ground fatalities dropped from 32 in FY99 to 27 in FY00, a 15-percent reduction.

Brigadier General Gene M. LaCoste, Director of Army Safety and Commander of the U.S. Army Safety Center, said this year's safety successes were possible because the Army—soldiers, civilians and family members—all worked together to manage risk effectively both on and off duty.

According to LaCoste, the

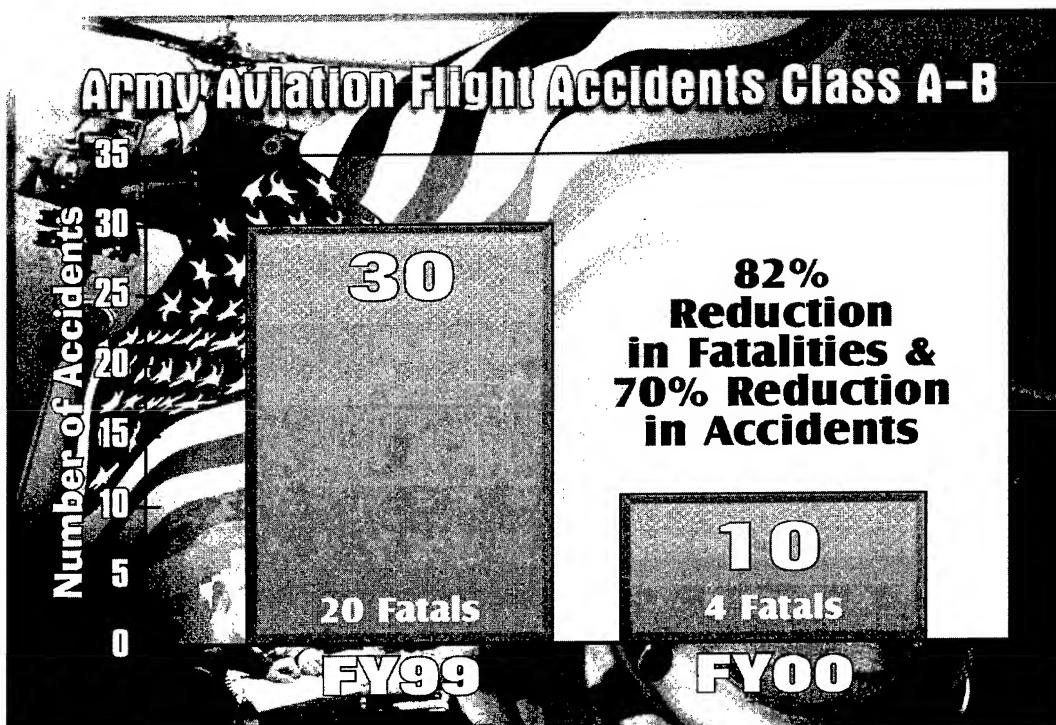
FY00 safety success can be attributed to four factors:

- Leadership involvement, which equates to command emphasis on safety programs.
- Improved ability of soldiers to identify hazards, assess risks those hazards impose, and implement controls to mitigate the risks.
- Enforcement and adherence to standards by leaders and soldiers.
- Improved self-discipline. "The Army's emphasis on the basics of leadership, standards and discipline is evident in the lives we saved and in the degree to which we enhanced our combat readiness by preserving both our people and our materiel resources," says LaCoste.

While the Army enjoyed a

record-breaking year in safety, there's still work to do. "We can never rest on our laurels. The numbers and rates aren't low enough. The numbers and rates will never be low enough if we lose even one soldier or civilian."

"Safety success is fragile," said LaCoste as he cautioned that we must stay focused on the missions and prioritize requirements. "To ensure that we continue to set soldiers up for success, we owe it to them to intensify our efforts to fully integrate risk management into our training, leader development, and materiel systems designs." By doing these things, LaCoste said, the Army can continue to achieve significant gains in safety.



LESSONS LEARNED: PAYBACK TIME

The phone rang three times before I realized it was the one on my nightstand and not the one in my dreams. When I looked over at the clock, the digital read out showed 0100. Who in the world would be calling me at this hour, probably a wrong number, and then I remembered I was first up as a board recorder. You see I work at the Safety Center as an accident investigator.

The voice on the other end of the phone said: *we have had a Class 'A' aircraft accident in Colorado; no fatalities but there were several injuries. A UH-60 aircraft has hit wires and crashed.*

I asked, what time do we depart? The voice, on the other end of the phone, replied: *0800 hours, via military air. Oh, by the way, the accident site is located in Colorado at the 12,000-foot elevation mark and there is plenty of snow on the ground, so pack accordingly.*

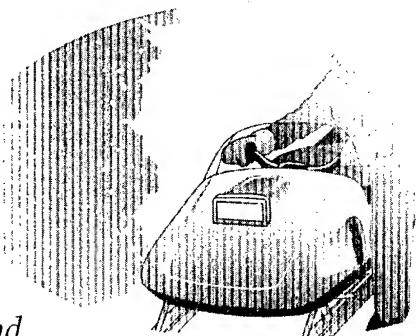
Great, I thought. All I had was a pair of cold weather-boots and a heavy flight jacket, and it was the middle of February.

At 0730 I met up with the board president at the airfield and we boarded our flight to Colorado. By late morning we were in Colorado, making arrangements to get a ride up to the accident site with the accident unit.

COLD WEATHER CLOTHING

When the supporting unit inventoried our cold weather clothing, they informed us that it would not be adequate. We were taken over to a Special Forces unit, where we were issued appropriate cold weather clothing. They provided us with all the cold weather gear we would need. You would have thought we were going to Alaska with all the stuff we were issued.

After arriving in Leadville, we checked into our hotel and linked up with the Special Forces commander for an update and briefing. The



Special Forces unit was providing site security for the downed UH-60 aircraft.

The briefing went something like this: *after arriving at the lake by ground vehicle you will ride on the back of snowmobiles along a four mile stretch of road and then travel a mile cross country to get to the crash site.* No problem—I thought, they had it planned very well except for one thing. You see, I am from Charleston, South Carolina, and you know they do not get very much snow. So what's the point? Well, the point is, I was to ride for five miles on the back of a snowmobile. I have never seen a snowmobile much less ridden on one.

Snowshoes, what are snowshoes?

So for the next hour I went through a very thorough class on the Do's and Don'ts of riding on a snowmobile and how to wear and walk on snowshoes.

THE RIDE OF MY LIFE

The next morning, the accident board team members met out in front of the hotel, counted heads, and then loaded into vehicles to drive out to the pick-up site. There we would link up with our snowmobile driver's. We made it to the pick-up site with little difficulty. After a few handshakes and formalities we were assigned snowmobiles with drivers. The snowmobile drivers were all senior Special Forces NCOs. They conducted a quick informal class on how to ride on a snowmobile. They covered such things as where to hold on, leaning into turns, and no talking to the drivers. We were about to load onto the snowmobiles when one of the NCOs asked an out-of-the-blue question: "Are you all pilots?" We said, "yes" in unison, wondering why in the world he would ask us such a question. Well, one of them said that they did a lot of riding in the back of helicopters. I thought to myself, so?

As I climbed onto the back of my snowmobile, I tapped my driver on the helmet to ask him a question. Before I could get my

question out he asked me if I saw the logo emblem on the back of his helmet. I told him that I did. He then instructed me to focus my eyes only on the logo and nothing else. "Do not lean to the left or right; just sit straight up and do not move around." I told him, sure, no problem. He asked me if I had any questions and I told him I had one. "OK, What is it, sir?" I inquired about the earlier question, asking us if we were pilots. As we started down the road at a brisk pace I heard these words: "**PAYBACK TIME!**"

For the next four miles, I hung on for dear life, thinking at any moment I was going to be hurled off this rocket into oblivion, never to be seen again in one piece. After what seemed an eternity, we slowed down and stopped. We had come to the end of the road and were going into the woods for the last mile. With my stomach up around my neck, I felt I had done very well to stay on this thing and proud to say that I never let that logo out of my sight.

We proceeded into the woods at a much slower speed. We had only been in the woods a short time, when I lost sight of the logo. I was wondering to myself, what happened to the logo? It just disappeared. It did not take long to figure out where it went, especially after a tree limb almost took my head off. You see, the driver was driving in, around, and under

trees. Somehow he had forgotten to tell me the part about driving under tree limbs. By now you probably have figured out what happened to the logo. As the driver went under a tree he ducked without telling me. It only took one time; the next time the logo disappeared, I ducked. We made it to the accident site without another incident.

PAYBACK

Upon arriving at the crash site, I dismounted from the snowmobile, took my helmet and gloves off, and reached over to shake the driver's hand and thank him for that wonderful experience. As we shook hands, not a word was spoken from either one of us, just a large grin covered the driver's face. I had been paid back in full, plus some, for all the helicopter rides he had ever been on.

I guess the point to this story is to remind pilots out there that you never know when and where you will encounter one of your passengers. They always seem to remember the rides they were given, especially the rides where the pilots tried to make them sick. So the next time you try to thrill your passengers with your flying skills, remember those two words: "**PAYBACK TIME**". You may never know when or where you will hear those words.

—CW5 Bill Ramsey, Accident Investigator, US Army Safety Center, DSN 558-2785, (334) 255-2785, ramseyw@safetycenter.army.mil

Safety goes hand in glove with mission

Safety is not an entity in and of itself. Commanders need to develop a healthy perspective as to safety, not think of it as an obstacle to mission accomplishment, but a *means* to mission accomplishment.

In this article I want to highlight the links among management, standardization, training and safety. These items go hand in glove with mission accomplishment and

cannot be separated.

AR 5-1, *Army Management Philosophy*, provides a definition of management: "*The process of acquiring, assigning priorities, allocating and using resources (people, money, materiel, facilities, information and time) in an effective and efficient manner.*"

DOD-MIL-STD-8823, provides a definition of safety: "*The conservation of human life and its effectiveness, and*

the prevention of damage to items consistent with mission requirements."

Note how these two statements follow the same theme as AR 385-95, Para 1-5 b (1), *Commander's Duties*, which calls for establishing requirements as necessary for the safety and conservation of aviation resources under their control. "*This will conserve manpower and materiel by reducing losses due to*

accidents."

The basic gist here is to accomplish the mission while conserving resources. We do this and prepare for this with training and standardization, or standardized training. Let's look at some statements and definitions in training and standardization, and note the ties with management and safety.

AR 34-4, Army Standardization, defines standardization this way: "The management principle which fosters the development and sustainment of a high state of proficiency and readiness among soldiers and units throughout an organization. Standardization is accomplished through the universal application of uniform practice and procedures."

You may ask where or at what level this standardization, or development of uniform practices, is developed. AR 350-41, Training in Units, provides some insight in this area, in paragraph 5-4, Training Standardization:

"Executing training using approved Army publications (field manuals, mission training plans, drills, soldier's manuals, MQS manuals, training circulars, training manuals, and technical manuals) provides the basis for standardization."

This looks very much like a

statement in AR 385-95, Army Aviation Accident Prevention. Paragraph 1-5 b. (2) states:

"Safety is a by-product of professionalism, and professionalism means complying with all set standards (Army regulations, aircrew training manuals, technical manuals, field manuals, SOPs and so forth.) By the book, disciplined operations are mandatory."

AR 385-10, paragraph 2-2 b. states: "Ensure that the risk management process is incorporated in regulations, directives, SOPs, special orders, training plans; and operational plans; and SOPs are developed for all operations entailing risk of death, serious

injury or property loss."

Furthermore, AR 385-10, paragraph 1-5e says "Appropriate action will be taken to expeditiously correct non-conformities with mandated standards, work place deficiencies, hazards, and accident causes.

AR 350-41, Training in Units, paragraph 3-3-2 f. notes the responsibilities of the commanders: "Set the standard for safety, provide guidance for risk acceptance decisions and conduct training risk assessments."

It can be deduced that safety is a result or product of proper management, training

and standardization. Also, the purpose of standardization of training, along with standardization and training is to allow accomplishment of the mission while conserving the resources.

A common thread runs through all of the terms—management, standardization, training, and safety. FM 100-5, Operations, lists safety as one of the four parts of protection, which is one of the four primary elements of combat power. It provides a fitting conclusion:

"Safety is a part of all combat operations and operations other than war. Commanders at all levels should embrace safety as a principal element in all they do. Safe procedures represent a skill—a product of enforced standard and training. Safety in training planning and operations is crucial to successful combat operations and preservation of combat power."

ACCOMPLISH THE MISSION-CONSERVE THE RESOURCES

—Major Keith M. Cianfrani, US Army Reserve Liaison Officer, USASC, DSN 558-9864, (334) 255-9864, clanfrank@safetycenter.army.mil



Product Quality Deficiency Reports

During an accident investigation, materiel factors are always investigated. The materiel factors investigation is conducted to establish the equipment's condition at the time of the accident, to describe the damage that occurred during the accident sequence, to determine any materiel failures or malfunctions that caused or contributed to the accident, and to identify the system inadequacies (root causes) for the materiel failure or malfunction.

One source of information that is reviewed during the materiel factors portion of the investigation is product quality deficiency reports (PQDR). The PQDR will alert the investigator to suspect parts that should be examined for failure or malfunction during the investigation. But the primary reason for submitting a PQDR is not to assist an accident investigator but to prevent the accident from ever happening.

DA Pam 738-751: *Functional User's Manual for the Army Maintenance Management System-Aviation (TAMMS-A)*, Chapter 3, specifically addresses PQDRs. And it's important to remember that Army Regulation 750-1: *Army Materiel Maintenance Policy and Retail Maintenance Operations*, paragraph 4.42, makes the requirements of DA

Pam 738-751 mandatory.

PURPOSE

According to paragraph 3-2a, the primary purpose of a PQDR is to "suggest corrections and improvements to aircraft and aviation-associated equipment, including mission-related equipment, and to alert AMCOM to problems encountered by the user due to receipt of defective equipment."

TYPES

Two categories of PQDRs, categories I and II, are addressed in paragraph 3-2b. Category I PQDRs are submitted to describe an unsafe condition, operational or maintenance procedure for aircraft, mission-related equipment, component or module, or repair part whose use is critical to airworthiness, and failure that could be expected to cause loss of aircraft and/or serious injuries to the air crew or ground personnel.

Additionally, Category I PQDRs are used to report the reason for failure, identified or suspected, when it does not provide enough warning for the aircrew to complete a safe landing, and it is reasonable to assume that the problem could be present in other aircraft of the same mission, design, and series (MDS) or to report incorrect or missing data in technical publications that may cause a hazardous operational or maintenance problem.

Category II PQDRs are submitted for items that do not meet the definition of a Category I item, but may adversely affect serviceability, durability, maintainability and/or reliability of an aircraft system, subsystem, repair part, component or module, and/or mission-related equipment.

CONDITIONS FOR SUBMISSION

One of three conditions described in paragraph 3-2d must be met for submitting a PQDR:

- The material failure or fault would cause a hazard to personnel, equipment, or safe completion of the mission;
- The equipment does not work properly because of bad design and/or material, or low-quality workmanship during manufacture, modification, conversion, repair, overhaul, or rebuild;
- Environmental conditions cause aircraft, aviation-associated equipment, including mission equipment, components or modules, repair parts, systems and/or subsystems to fail.

SPECIAL CONDITIONS REQUIRING SUBMISSION OF A PQDR

There are certain special conditions described in paragraph 3-2e that require the submission of a PQDR. A Category I PQDR will be submitted when any condition involving personnel safety or safety of flight (SOF), as

defined in AR 95-1: (Flight Regulations), is discovered. Additionally, a PQDR must be submitted to AMCOM when suspected or confirmed materiel failure is the cause of a Class A, B, C, D, or E accident/incident. A copy of the PDQR must also be submitted with the accident report in accordance with AR 385-40: *Accident Reporting and Records*. When the PQDR is submitted on a failed part that caused an accident and/or incident, the unit will not be charged with the mishap. The mishap will be charged to a special DA account in

accordance with AR 385-40, paragraph 1-6b(1). (NOTE: There is no specific block on DA Form 2397-AB-R (AAAR) to enter the PDQR number. It is recommended that the PDQR number be annotated in block 15, SUMMARY, of the AAAR.)

SUBMISSION OF PQDRS

PQDRs should be submitted to AMCOM using SF 368 and forwarded to the addresses listed in Table 3-4 of DA Pam 738-751. Remember, Category I PQDRs must be submitted telephonically within 24 hours and followed up with an

electronic message, fax, or e-mail. Category II PQDRs must be submitted within 5 working days after discovering the fault or failure.

The PQDR is a very effective accident prevention tool—if everyone takes the few minutes required to complete and submit the report when it is required. Let us help you prevent accidents by informing us of the problems you are having.

—Gary Braman, Fixed-Wing/Cargo Aircraft Systems Safety Manager, USASC Aviation Systems and Accident Investigation Division, (334) 255-2676, DSN 558-2676, bramang@safetycenter.army.mil

Haven't gotten around to filling out all those forms?

You know you need to tackle that issue that's been nagging at you. Wouldn't it be great if you could just take care of it on the computer?

If you've been held back by dread of filling out DA Form 2028 or Product Quality Deficiency Reports (SF 368), help has arrived! A new Army electronic deficiency reporting system has just been put in place. Here's how to learn more:

AMCOM

E-mail: cfo@redstone.army.mil
FAX: DSN 746-4904/Commercial
256-876-4904
Phone DSN 788-6665/Commercial
256-876-6665

CECOM

E-mail: cfo@cecom2.monmouth.army.mil
FAX: DSN 992-1413/Commercial
732-532-1413
Phone: DSN 992-3808/Commercial
732-532-3808

SSCOM

E-mail: hormsbee@Natick-amedd2.army.mil
FAX: DSN 256-5286/Commercial
508-233-5286
Phone: DSN 256-5043/Commercial
508-233-5043

TACOM-ACALA

E-mail: qawqdrs@ria-emh2.army.mil
FAX: DSN 793-6653/Commercial

309-782-6653

Phone: DSN 793-6764/Commercial
309-782-6764

TACOM-Warren

E-mail: tacomdrs@octagon.tacom.army.mil
FAX: DSN 786-6637/Commercial
810-574-6637
Phone: DSN 786-5422/Commercial
810-574-5422

DA Form 2028

The DA Form 2028 can go several ways:
Snail Mail:

Commander, AMCOM (US Army Aviation and Missile Command)
AMSAM-MMC-LS-LP, B-5301, Room 1128
Redstone Arsenal, AL 35898-5230
E-Mail: ls-lp@redstone.army.mil
FAX: DSN 788-6546/Commercial
256-842-6546

Web Access: www.uhpo.redstone.army.mil

The point of contact is Dale A. Lowe. He can be reached at
DSN-746-7758/Commercial 256-876-7758.

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Holiday safety

Put Safety at the Top of Your Holiday List

The holidays are a joyful time of the year as we gather with our families and friends. Often, our lives become very hectic as the season approaches, and it's easy to overlook common safety precautions. Just as there are safety rules and precautions to help you on duty, there are also safety guidelines to help you through the holidays while off duty. As joyous as the season is, we must remember to keep our guard up when it comes to accident prevention. So, as you're making your holiday list, put safety at the top.



- Smoke detectors**
- Fire extinguisher**
- Christmas tree**
- Lights and decorations**
- Fireplace**
- Parties and alcohol**
- Holiday Blues**

Holiday Safety List

SMOKE DETECTORS AND FIRE EXTINGUISHERS

If you don't have these essential lifesaving devices, put them at the top of your shopping list. Smoke detectors should be installed on each floor of your home and outside each bedroom. Avoid placing smoke detectors in the kitchen, where false alarms are common. Test your smoke detectors at least once a month, and replace their batteries once a year. Make sure every member of your household knows what

the smoke detector alarm sounds like and what to do if there is a fire. Also, buy a fire extinguisher for your home and make a habit of inspecting it on a regular basis.

CHRISTMAS TREES

Christmas trees are one of the most popular traditions of the season—and one of the most dangerous. Whether you choose a live tree or an artificial one, there are certain precautions that must be followed.

Freshness is the most important safety factor. The higher the moisture content, the less likely the tree is to dry out and become a fire hazard. The best way to ensure a tree is fresh is to cut it yourself; however, sometimes that can't be done. Pre-cut trees can be just as good if you use these tests to help judge a tree's freshness:

- Lift the tree and tap the trunk on the ground. Only a few needles should fall, and the trunk should be sticky with sap.
- Make sure the needles are attached firmly to the twigs and that the needles can be bent without breaking.

Once you get the tree home, take these precautions to keep it fresh:

- Immerse the tree trunk in a bucket of water until ready to decorate.

■ When you're ready to put up the tree, cut a one- or two-inch diagonal slice off the bottom of the trunk. The new cut helps the tree absorb water and will preserve freshness.

- Put the tree in a sturdy stand with widespread legs and keep the stand filled with water the entire time the tree is indoors.
- Keep the tree at least three feet away from heat sources such as fireplaces and space heaters.

When the holidays are over, take the tree outside as soon as possible. Recycle or discard it according to your local city or county regulations.

If you are considering using an artificial tree this year, look for the label "Fire Resistant" when purchasing. Be aware that even fire-resistant artificial trees can catch fire—especially if they have years of dust buildup on them. Wash the artificial tree each year and store the parts in plastic bags. When decorating, be sure lights are designed for artificial tree use.

Important: To keep your tree from being knocked over, set it up where it is out of the way of traffic and does not block entrances or exits.

LIGHTS

Mixing and matching lights can create a fire hazard, so keep outside lights outside and inside lights inside. Examine lights before you hang them. Check to see that each strand has a United Laboratory (UL) label, indicating it has been safety tested. Inspect the light strings and cords for fraying, bare wire, loose connections and broken sockets. After replacing missing or broken parts, check each set by setting it on a nonflammable surface and plugging it in for 10-15 minutes to see that the lights don't melt or smoke.

Now that you have examined the lights, you're ready to hang them. Be sure to take the following precautions:

- Position the bulbs so they are not in direct contact with needles or ornaments. Also keep lights away from curtains or flammable materials.
- Don't overload electrical outlets. Don't connect more than three sets of lights to an extension cord.
- Keep cords and plugs away from the water under the tree.
- Don't run a cord under a rug or carpet, since wires may overheat and surrounding materials could catch on fire.
- Be cautious when placing cords behind furniture—if pinched, cords may fray.

Remember: Unplug all decorations inside and outside the home before leaving the house or going to bed.

FIREPLACES

The holidays bring to mind images of relaxing in front of a cozy fire. But before you get too comfortable, review these safety rules for using fireplaces:

- Ensure a professional cleans your chimney every year.
- Don't use a fireplace to burn wrapping materials or newspapers. It can create toxic fumes and even a flash fire.
- Use kindling and wooden matches to light fires, not flammable liquids.
- Always use a fire screen.
- Don't wear loose or flowing clothes when tending fires.
- Don't close the chimney flue until you ensure the fire is completely out.
- Ensure the fire is out before leaving the house or going to bed.

Important: Dispose of ashes in a metal container. Never store them in or near the house.

HOLIDAY PARTIES AND ALCOHOL

It's great to get together with coworkers and friends to celebrate the season. Let common sense be your guide. Please don't drink and drive. Use a designated driver or take a taxi home. Better yet, don't overdo it. If you're hosting a party, serve plenty of food along with the drink.

HOLIDAY BLUES

Finally, the holiday season--a joyous season for most people--is just the opposite for many soldiers away from home, perhaps for the first time. Being alone for the holidays can have a depressing effect. Don't let someone you know spend the holidays alone. The true meaning of the season is that of giving and opening our hearts to others.

—Reprinted from Countermeasure



Can I wear sneaker boots?

The Army Safety Center has received inquiries asking if the all-leather sneaker boot can be worn by Aviation crewmembers. It meets the description of "boots, black, leather" in AR 670-1 and AR 95-1, so why not?

We contacted the U.S. Army Aeromedical Research Laboratory, Directorate of Combat Development, DCSPER, and Natick Laboratory, and the answer is still no. Here's why: In AR 670-1, chapter 2, there is a paragraph that reads, "Manufacturers and suppliers of uniform clothing items will (1) Obtain certification required under the UQCP from the U.S. Army Uniforms Branch, U.S. Natick Research Development, before manufacturing any items for sale. (2) Affix the following label certifying the uniform items were manufactured in accordance with the UQCS prior to offering the items for sale: *"This garment is warranted to meet or exceed the standards of specification number _____ and was produced under specification number _____ from basic material warranted by the manufacturer as having been produced in accordance with the sample under current certification."* (3) Familiarize themselves with Army specifications, purchase descriptions, shade standards, and other pertinent information and submit required samples and information to the Uniforms Branch for approval. Fact of the matter is that your favorite sneaker boot company has not submitted any samples for testing that meets the U.S. Army basic requirements or standards for footgear.

Authorized manufacturers such as Cochran and H&H have the specification number stamped on the boot, which specifies they have met all the said requirements. In addition both the Air Force and Navy Safety Centers confirm that they do not authorize sneaker boots for their aircrews. Not just any boot, leather, black, meets the requirement for aviation use.

—MSG Terry Briggs, Aviation Investigations, US Army Safety Center, DSN 558-3703, (334) 255-3703.

NCO Corner

NO RESPECT

Recently I was reading through a Navy magazine called "MECH" April-June 1999 issue. I came across an article written by Joe Castro of the Navy Safety Center. The article was titled, "Are you part of the Solution or the Problem?"

In reading this article I thought, "This could be about our Facility!", albeit some of the equipment was different. I discovered that we, on the Army side, realize many of the same types of problems. Having visited a few other facilities in my career, Active and National Guard, I found the same problems. Problems not only with the equipment, but also problems with attitude, application and education.

Attitude in the sense of how the equipment is used, treated and cared for. Most often the attitude is that the equipment is "Not Critical", as in, "It isn't important because it doesn't fly" or "I work on Aircraft not Ground Equipment". These attitudes and others like them often lead to the abuse and the poor condition of our Ground Support Equipment. *It Gets No Respect!*

Application in how the equipment is used. How many facilities can say, "We never have used our tug as a taxi"? How many aircraft mechanics can say they have never used a piece of equipment improperly? I should add here, "Knowingly" used a piece of equipment improperly. Which will take us to the next point.

Education is knowing the basic PMCS, BEFORE, DURING AND AFTER USE checks. Most equipment users will say, "I know how to use that piece of equipment", when in reality they know how to get it to do what they need it to. Far too often they won't know where to find the dip stick, if it is so equipped. Therein lies the problem, the lack of education about the equipment.

The following are sample incidents where all three stated problems came into play:

A Test Pilot and Ground Crew were going to power up an OH-58A to do some ground runs and MOC's. They required the use of the 10KW

Generator (Ground Power Unit). Though it is normally stowed on the flight line, the Ground Crew found it in the GSE storage yard. They rolled it out to the aircraft and immediately plugged it in. Upon doing so sparks and smoke began to come from the Generator. They quickly unplugged it and rolled it away from the helicopter. When they finally opened the access panel on the generator they found a red tag and the fact that the battery had been removed in the course of other maintenance being performed.

When they plugged it in, the helicopter battery current back charged the system, and shorted out the cables against the frame of the Generator. The logbook DD 5988 had been annotated with the maintenance ongoing. Yes, a tag could have been placed on the outside of the piece of equipment. However, a "before use" check would have prevented the resulting damage.

An aircraft mechanic was in a rush to service the tires on an AH-64A. He drove a tug to the GSE Storage yard and hooked up the nitrogen cart trailer. In his rush to get out to the aircraft, he cut the corner too tight. The left tire of the trailer came in contact with a B-4 work stand parked next to the trailer and punctured the tire. This caused the unnecessary expenditure of

approximately \$ 60.00 for a new tire. The irony is that the aircraft had to wait even longer for the tire to be changed than if the mechanic had taken a little more care.

Numerous incidents like these and incidents that result in injury, even death, occur throughout the Army system. The vast majority of which can be prevented through changing attitudes, application(use) and educating personnel. Even though we are only talking about lowly Ground Support Equipment, it deserves respect too!

The first step in rectifying the problem is awareness. Then by surveying your own particular situation, developing a training plan that fits your needs and schedule. It all comes down to Supervision. Supervisors have to insure the training is being used and followed. They must regularly re-emphasize the criticality of Ground Support Equipment and how it is treated and cared for. Remember the key word is support; without it something usually falls, fails or just comes up short.

It is your program, your equipment, Show it some *RESPECT!*

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Accident briefs

Information based on *preliminary reports of aircraft accidents*

AH1



Class C

F series

■ Main rotor tiedown was left on during start up and became entangled with tail rotor assembly.

Class E

F series

■ During engine run up, aircraft's engine fuel pump caution light illuminated and remained on. The mission was canceled. Maintenance found water in the wire lead boot for the fuel pump, connections were corroded. Connections cleaned and boot sealed.

AH64



Class C

A series

■ During NOE flight, main rotor blade contacted a power line. Main rotor blade tip cap was damaged.

Class E

A series

■ Aircraft was in cruise flight at 3500 feet and 120 knots when the No.2 nose gearbox chip light illuminated. Crew completed the emergency procedures for this fault, when the No.2 nose gearbox PSI segment light also illuminated. Crew then shutdown the

No.2 engine and completed a rolling landing. Maintenance discovered that the output seal was blown, and that only 20% of the oil remained in the gearbox. Chip detector was pulled and found to have small flakes of metal on the plug. Maintenance replaced the #2 engine nose gearbox.

■ During run-up, TADS registration check was out of tolerance. Aircraft was shutdown without further incident. Mission aborted. Replaced data entry keyboard.

■ During cruise flight, TADS was excessively grainy. Aircraft landed without further incident. Replaced night sensor assembly

■ During cruise flight, HARS went into free inertia and doppler was inoperable. Aircraft landed without further incident. Replaced doppler.

■ After takeoff, on crosswind, the OIL PSI Accessory Pump caution warning light illuminated. Aircraft made a precautionary landing and shutdown without further incident. Maintenance replaced the accessory oil pressure switch. Maintenance checks were good. Aircraft was returned to service.

D series

At 300' AGL and 60 KIAS No.1 generator fail was displayed via up front display message. Both pilots' stations lost their multifunction display and helmet display unit video for 20-30 seconds. Their function returned as inverse video after an additional 30-40 seconds. The aircraft was landed without further incident. Maintenance replaced the failed generator. Maintenance operational check was performed and aircraft was released.



Class E

J series

■ During takeoff climb, the right propeller RPM dropped below 1300 RPM. Normal range is 1400-1700. Instructor pilot reduced the right power lever to idle and feathered the right propeller. A single engine landing was made without further incident. Maintenance found that the wire rope on the propeller reversing push/pull control assembly had been stretched.

N series

■ While in flight, aircraft's Mission Power Fault Light illuminated and the scent of melting plastic was noticed. A descent to 10,000 MSL with oxygen mask on was initiated while performing the emergency procedure. During the descent the R/Bleed Air Fail Light illuminated and the R/Bleed Air was turned off. The scent of melting plastic stopped and the aircraft was landed without further incident. Maintenance replaced failed poly tubing.



Class E

D series

■ During ground taxi the crew smelled smoke in the aircraft. The aircraft

was stopped and the crew performed emergency shutdown. The flight engineer found the left aft landing gear on fire. The brake had engaged during taxi. Maintenance replaced the brake assembly.

■ While aircraft was on the ground, overhead console sparked and crew noticed the smell of burning wires. Aircraft was shutdown without further incident. Replaced stick positioner rheostat.

■ During run-up, the aircraft's N2 Beep Trim failed. Emergency Engine Trim functioned normally. Aircraft was returned to home with No.2 emergency trim in manual position without further incident.

■ Following landing, the aircraft's combining transmission cooling fan shaft containment shield was found to be loose. The four retaining studs which attach the assembly to the combining transmission had worked loose.



Class E

C series

■ During run-up, crew heard sputtering and backfire noises. Aircraft was shutdown without further incident. Replaced fuel control and bleed valve. MOC and test flown.

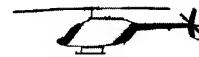
■ Engine failed during run-up. Aircraft was shutdown without further incident. Flame out inspection was conducted. Fuel nozzle was replaced. MOC and test flown.

DI series

■ Engine was found to be leaking oil during hover. Aircraft landed without further incident. Replaced generator garlock seal.

DR series

■ While in formation flight, the pilot on the controls reduced power while in a turn. The aircraft warning system indicated a false ENGINE OUT message along with audio tones. The crew verified the engine was still operating and announced the condition to the formation. The formation was over trees and the FARP was less than 1 Km away. The crew flew to the FARP, landed and shut the aircraft down without further incident.



Class E

A series

■ Aircraft's main generator failed during hover. Aircraft landed without further incident. Replaced starter generator.



Class B

L series

■ Crew experienced insufficient power during approach. Aircraft landed 50 feet short of the LZ.

Class C

A series

■ During approach to a hospital helipad, a wheelbarrow was blown into two parked civilian vehicles.

■ During level flight at 2500 MSL at constant cruise speed 145 KIAS, a loud bang from rear of aircraft was heard. Aircraft yawed approximately 10 Degrees left and ENGINE OUT audio and light came on. Collective reduced to regain rotor RPM. Aircraft was decelerated to approximately 90 KIAS to maintain level flight. PI noted No.2 engine TGT climbing rapidly into the red and engine speed passing below 40%. After engine failure was confirmed and level flight was sustained, aircraft was flown approx 5 miles to nearest airport. Crew completed a roll-on landing and normal shutdown of No.1 engine. Suspected failure of the cold section of No.2 engine.

■ While performing multiship operations as a flight of three, crew of Chalk 2 noticed a loud exploding sound in the area of the No.2 engine. Engine turbine gas temperature exceeded 950 degrees Celsius. The aircraft was landed to a nearby area. After passengers evacuated the aircraft, smoke was noted coming from No.2 engine compartment. The main and reserve fire bottles were discharged, and the engine was shutdown without further incident. An inspection of the No.2 engine revealed that a blade from the first stage axial compressor had broken off during flight, resulting in a partial engine failure. Materiel failure suspected, engine replaced and aircraft returned to service.

■ On short final for landing, aircraft's main rotor blades contacted the

ALQ-144. All four rotor blades were damaged.

■ During a flight capability test, load was inadvertently jettisoned from aircraft. The controller's finger guard was reportedly bent.

■ Aircraft's tail gear strut failed during a practice run-on landing. Tail gear and tail boom damaged.

L Series

■ During post phase inspection run-up, right hand folding stabilator folded up and made contact with the tail rotor blades, damaging the tip caps. Aircraft was shut down without further

incident. Right hand folding stabilator locking pin was not installed.

Class D

A series

■ Upon landing at patient pickup location, medic discovered that front window of the aircraft's left cargo door was missing. Upon discussion, crewmembers recall feeling an unusual "blast of wind" just before takeoff, concluding that the window was lost about that time. PC decided that since there were no unusual noises or vibrations at that time, to continue

the medevac mission. Patient was taken from point of injury to hospital. Aircraft was shutdown and surveyed with no damage found. Returned to home base with no further incident.

Class E

A series

■ While on the ground, engines running, aircraft's No.1 fire warning light illuminated. Aircraft was shutdown without further incident. No.1 engine upper flame detector was replaced, MOC OK.

For more information on selected accident briefs, call DSN 558-9855 (334-255-9855). Note: Information published in this section is based on preliminary mishap reports submitted by units and is subject to change.

Black Hawk Droop Stop

The UH-60 main rotor is equipped with droop stops and flap restrainers to prevent extremely high or low blade flapping at low rpm. As rotor speed is increased to approximately 70 to 75 percent rpm, the droop stops rotate from their "static" to their "dynamic" position. The audible knocking of droop stops during engagement or shutdown, as they are rotating between the static and dynamic position, is a good indicator to the pilot of droop stop pounding (DSP).

To avoid DSP during rotor runup or shutdown, the cyclic must be centered or displaced very slightly into the prevailing wind. The collective should be raised no more than one inch, above full down and pedals centered. If possible, shutdown should be avoided until adjacent helicopters are at flat pitch.

DSP can also occur with the droop stops in their dynamic position, usually with excessive aft cyclic, low collective, and with all wheels on the ground. Although DSP can occur during rearward taxi (prohibited by the operators manual) and downslope landings, the maneuver that is most likely to produce DSP is the roll-on landing. Aerodynamic braking with cyclic is permissible while the tail wheel is on the ground before main gear contact. Once the main wheels contact the ground, the cyclic must be centered,

collective lowered (center cyclic before lowering the collective), and brakes applied as required. (A complete description of the maneuver is given in task 1029 of TC 1-212.) Initiate all cyclic control input on the ground with sufficient collective input to maximize the effect of cyclic input, thereby minimizing cyclic displacement.

If a pilot attempts to slow the aircraft after main wheel contact by using extreme aft cyclic as he lowers collective, he will hear an audible 4/Rev knocking. This is the first indication of DSP. With more rear cyclic, severe DSP and contact with the ALQ-144 may result. Severe DSP can cause dynamic components to be stressed beyond design limits.

To avoid droop stop pounding during a roll-on landing:

1. Keep speed in accordance with TC 1-212 (60 knots or below) before touchdown. Effect termination by making the tail wheel touchdown above effective translational lift (ETL) but below 60 knots ground speed.

2. Be aware of the tip path plane—excessive aft cyclic will place the tip path unusually high in your field of view.

3. After landing, neutralize (center) the cyclic before lowering the collective.

Excessive forward cyclic during taxiing can lead to DSP. Aviators are reminded to comply with Chapter 8, paragraph 8.26 and the Caution Note with regard to DSP.

—Jay P. Merkel, AMSAM-RD-AE-I-D-U Comm 256-313-4806 DSN 897-4806

Boeing Agrees to Pay Up to \$54 Million for CH-47D Gear Problems

In the late 80's and early 90's, the Army suffered the loss of five service members and several CH-47Ds due to faulty gears Boeing installed during the re-manufacturing of CH-47A-Cs into the CH-47D model Chinooks. As a result of these losses, suits were filed against Boeing and its subcontractors, Litton and Speco. These suits were recently settled with Boeing for up to \$54,000,000. Of that, \$10.5 million was paid to the person, the "Relator," that identified the problem

in Speco's processes and sued the companies on behalf of the Army.¹ An additional \$7.5 million was paid to the Relator's attorneys.

"This case demonstrates the tragic consequences that can occur when faulty parts are sold to the Defense Department. The lives of our service members, not only dollars, are at stake. This lawsuit sends a message that the United States will not stand by if contractors provide our military with substandard and dangerous equipment" commented David Ogden,

Assistant Attorney General of the Justice Department's Civil Division.

If you know of a similar problem with a contractor, please contact your nearest JAG office and speak with the Procurement Fraud Advisor.

—LTC Cindy Gleisberg, Judge Advocate General, US Army Safety Center, DSN 558-2924 (334) 255-2924, gleisberg@safetycenter.army.mil

¹ Certain people can bring suit against a contractor on behalf of the government and then ask the government to join in the suit. In this case, Brett Roby, a former Speco quality engineer, filed the claim pursuant to 31 U.S.C. § 3730(b) on behalf of himself and the US Government. This law encourages workers to help protect public funds by giving them an incentive to alert the government to false or fraudulent claims.

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A handwritten signature in black ink, appearing to read "Gene M. LaCoste".

Gene M. LaCoste
Brigadier General, USA
Commanding